



# CANADA

AS IT APPEARED TO  
SCOTCH  
AGRICULTURALISTS

BY  
MR. HARRY HOPE, J. P.  
AND  
PROF. R. B. GREIG, F. R. S. E.

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Being a Lecture Delivered by Mr. Hope  
Before a Meeting of the East Lothian  
Farmers' Club at Haddington  
on January 29, 1909.

AND  
A Series of Letters Written by Prof. Greig,  
while in Canada, to the "Aberdeen  
Free Press."

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## INTRODUCTION.

At the invitation of the Canadian Government "The Scottish Agricultural Commission" visited Canada in the autumn of 1908. The Commission consisted of 22 members largely drawn from the Scottish Agricultural Commission to Denmark, 1904, and the Scottish Agricultural Commission to Ireland, 1906, and were all either experienced practical farmers or those interested in agricultural education and development.

The following brief account is given of Mr. Hope and Professor Greig, whose opinion of Canada is to be found in the following pages.

**HARRY HOPE, J.P.**, is a Justice of the Peace for Haddingtonshire, and President of the Scottish Chamber of Agriculture. He is tenant farmer of Oxwellmains, which, along with Broxmouth Home Farm, comprises 420 acres arable and 280 acres grass land. The farms are on the Duke of Roxburg's estate near Dunbar. The "red soil" in this district is well known for potato growing, and is rented as high as ninety shillings per imperial acre. The potatoes are the late variety for the London market, where, owing to their special qualities, they command a good price. A large breadth of the "red soil" is under potato culture, the high rents paid preventing other crops being grown at a commercial profit.

Mr. Hope contested the counties of Moray and Nairn in the Conservative interest at the General Election of 1906. He is a member of the Territorial Army Association for Haddingtonshire. Mr. Hope is also Chairman of Dunbar (Landward) School Board, member of Dunbar Parish Council, and member of the County Licensing Court.

**PROFESSOR R. B. GREIG** is a Fellow of the Royal Society, Edinburgh; Fellow of the Highland and Agricultural Society; Fordyce Lecturer, Aberdeen University (since 1903); Secretary of the Departmental Committee appointed by the Board of Agriculture to investigate the diseases of sheep, and member of Council of Agricultural Education Association.

Mr. Greig was educated at Edinburgh University. He was Farm Manager at Carrievale, Saskatchewan, Canada, during 1893 and 1894, and was farming at Balcurvie, in Fifeshire, Scotland, during 1895, 1896 and 1897. From 1897 to 1900 he was Lecturer in Cheshire Agricultural College, and from 1900 to 1903 Lecturer in Agriculture, Armstrong College, Newcastle-on-Tyne. The Aberdeen and North of Scotland Agricultural College, in which Mr. Greig is now Lecturer, is associated with the University of Aberdeen, of which Lord Strathcona is Chancellor. The College is the centre of agricultural teaching and research in the North of Scotland, and its class rooms and laboratories are included in the famous Marischal College, which was founded in 1593.

# East Lothian Farmers' Club.

MR. HARRY HOPE ON "AGRICULTURE IN CANADA."

(Lecture as reported in the "Haddingtonshire Advertiser,"  
February 5, 1909.)

Mr. Harry Hope, Barneyhill, Dunbar, in the course of an address on "Agriculture in Canada," said:—In venturing to address the members of the East Lothian Farmers' Club this afternoon on "Agriculture in Canada," I trust no one will think—in the remarks I propose to make—that I claim to know everything about the position and the condition of the agricultural industry in the vast Dominion of Canada. The country is so large, distances are so great, and the systems of farming so diverse, that he indeed would be a rash man who thought he could tell all about agriculture in Canada after a tour of seven weeks in the country, therefore in the remarks which I make I—in a very humble way—merely wish to give you my impressions of what we saw and heard.

On the invitation of the Canadian Government, twenty-two Scotsmen sailed from Liverpool on 7th of August, landed at Rimouski, on the magnificent St. Lawrence River, on the 13th August, where we were met by representatives of the Government and conducted through each of the nine Provinces forming the Dominion, and after travelling from the Atlantic to the Pacific and back again, and down south over the American border, we sailed for home again from Quebec on October 2nd, arriving at Liverpool seven days later. During the fifty days we were in Canada we travelled about 8,560 miles by train, 770 miles by driving—either in rigs or motors—and 370 miles by steamboat, in all about 9,700 miles in Canada. In order to do all that travelling in the short space of fifty days and yet have opportunities of seeing the country—not just from the windows of the railways cars—we had to do a great deal of night travelling, and of the fifty nights we were in Canada I was in the train thirty, hotels seventeen, and camping out on the prairie three. Such is a rough outline of our itinerary and, I may say, the Government, besides treating us with the greatest of kindness, did all that was in their power to show us the country and bring us into touch with farmers of all classes so that we might see agriculture as it is, and the conditions under which men live who are working at the industry.

In attempting to give a description of the agriculture of Canada, it is well, I think, to divide the subject up into four classes:—(1) Mixed and dairy farming, (2) wheat, (3) fruit, and (4) ranching.

## MIXED AND DAIRY FARMING.

This is the system which is carried on largely in the five eastern Provinces, viz., Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Ontario. There are other districts where some very fine farming—under this heading—is carried on, such as in the Edmonton district of Alberta, and in the rich Delta land adjoining the Fraser River, near Vancouver, in British Columbia.

Prince Edward Island—called by many the “Garden of the Dominion.” Here, with a light soil—some of it reddish in color like our Dunbar land—and a sufficient rainfall, is a district peculiarly suited for this kind of farming, oats, potatoes, turnips, corn (that is maize, in Canada “corn” is the word for maize), and clover all grow well. The latter especially seems to be extra well suited to the soil, and the crops of potatoes and swedes were also excellent. The price for milk which is obtained by the farmer is about 30 cents to \$1.00 per 100 lbs of milk—which runs to about 4½d. to 5d. per gallon. Cheese is made during the summer months and butter in winter, and pigs are fed on the skim milk which is returned during the butter-making period. The housing accommodation for the cows is worthy of some notice. The byres or “barns” as they are called—large, high two-storied buildings, all made of wood, except the lower foundation part of the walls—are so constructed that under their roof everything is protected, stock, crop and implements. On the ground floor is the stall accommodation for the cows and also for the horses, and in many cases this is not too well lighted or ventilated, as the roof is low, and the cubic space per cow does not come up to the standard which is supposed to be requisite by our authorities in the “old country.” Byres, of course, vary, but about 300 to 400 feet of cubic space is about the usual allowance. Another matter at variance with old country regulations is that the floor and grip are wooden and consequently the surface is not so clean as we were accustomed to see. In another part of the ground floor the horses are stabled and compartments for storing roots and feeding stuffs are in a convenient position; above the byre, etc., is a loft in which all the hay and straw and unthreshed grain is kept. There are no stacks outside, as we have. Holdings in this Province extend, very generally, to about 100 acres, and on such a farm the rotation might be as follows:—20 acres clover hay; 40 acres pasture (one and two year old); 20 acres roots (potatoes, swedes, or corn), 20 acres oats. Land in Prince Edward Island, as all over Canada, is nearly all held freehold. The value of good farming land is from 30 to 50 dollars—£6 to £10 per acre—and it seemed to me not too dear at the money, and a young man willing and able to work and having acquired some local experience—and this is very valuable before

investing any capital—would, I think, get on fairly well and make a comfortable living in this Province.

Nova Scotia and New Brunswick.—In these two Provinces mixed and dairy farming largely prevails, and though to a considerable extent oat and hay selling is the system, yet it is being recognised that stock must be kept if the land is to be kept up in condition, and so an increasing amount of dairy stock is being kept. Here, again, about 100 acres is the general size of the holding. Wages in these two Provinces run about 22 dollars per month and board, but there is a significant fact everywhere in evidence in Eastern Canada, and that is that many of the young men are leaving their fathers' farms and migrating to the west where wheat farming is offering such attraction.

Quebec, equal to the size of France and Prussia, is a Province which, while producing a very large amount of general agricultural produce, still depends very largely on its production of dairy products, which products at the last census were calculated to be worth 20 million dollars per annum. In districts which we traversed we found holdings to extend very generally to 100 acres—all freehold—and on which a stock of from 10 to 15 cows were kept, along with some young stock. This system may be described as typical and the method pursued is as follows:—The stock are grazed on the pasture in summer, that is from about 15th May till 1st October, when they are taken in every night and let out again in the morning, this being done till about 15th November, when they are taken in and housed comfortably for the winter. The system of feeding them is hay and straw and cut corn ensilage with a little bran or linseed meal added. These cows so kept are considered to yield about 50 dollars worth of milk each per annum to the farmer when the milk is taken to the cheese factory.

Ontario.—Here in Ontario are some of the richest dairy lands in Canada, and some fine herds of cows are seen. Ayrshires, Holsteins and French Canadians are the principal breeds kept, and many of them were of the best. Here, as in Quebec, and all over Eastern Canada, holdings average about 100 acres. The keeping of milk records is largely adopted and in teaching this and other useful knowledge the Government College at Guelph is doing good work. The general price obtained for milk from factories is about 95 to 100 cents per 100 lbs. of milk, and, judging from the condition of the holdings and the nice looking farm houses, the farmers in this Province will be doing well. As to the amount of labour employed on a farm conducted on the lines as before described, the farmer himself and the other man all the year will do the work, with one extra man in harvest for six weeks; the latter will get about 1½ dollars per day with board, and the yearly man

about 300 dollars per annum with board. The horses kept to work such a farm will be generally three—one of them a brood mare—and about fifteen milking cows on a farm of about 100 acres.

### WHEAT FARMING.

The production of wheat is the dominant object of the young farmer in Canada at the present time, and not only are young men being drawn to it from the Eastern Provinces, but farmers from the Western States of America are coming up in large numbers—selling out their holdings in the land of the “Stars and Stripes” and taking up virgin land on the Canadian prairie. In that long stretch of country—about 900 miles—extending from Winnipeg, or, more accurately, from 50 miles east of it, to the base of the Rocky Mountains, lies the great wheat-lands of the west. It is here that a rapid transformation is taking place. No doubt for many years—say twenty-five—wheat has been grown extensively in Manitoba, the eastern of the three prairie Provinces, but it is only in the last few years that the suitability of Saskatchewan and Alberta as wheat growing Provinces has been realised, and now “King Wheat” reigns supreme in these prairie Provinces which were previously considered only to be fit for ranching, with the result that immigration is pouring into that part of the Dominion and the wheat area is being rapidly extended, and it appears likely to go on increasing. Of course conditions and methods vary considerably in many districts, there being such a variety of soil and in quantity of rainfall, not to speak of risks of early frosts, therefore, I think it well to divide my remarks on the wheat lands up into sections—one on each Province.

Manitoba.—Here we find that wheat has been grown in many districts for 25 or 30 years, but still large pieces of the Province have yet to be broken up and seeded with wheat. In the districts first referred to, where cultivation has been going on for several years, the rotation is very largely as follows :—Two or three years in wheat, then one year either in oats or barley, seeded out with Timothy hay, which lies for one year, and then into wheat again; or another rotation is two or three years in wheat, then a year in fallow (no crop), and then begin again with wheat. The latter method allows the land to be cleared when fallowed, and this is important, as wild oats are a very prevalent weed. The yield of wheat per acre may be stated at 24, 20 and 16 bushels per acre, drilled in, and the me crops, or where only two years wheat are taken, at 24 and 20 bushels per acre respectively. Oats on an average yield about 50 bushels on good land, and barley about 40 bushels. The seeding for wheat—that is spring wheat—is from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  bushels per acre, drilled in, and the methods followed are :—The land is ploughed in the “fall”—that is before winter—and

then it is ready to be sown — drilled in — in the spring whenever the frost comes out. Generally about the first week in April the frost begins to give way, and whenever the land is soft, to a depth of four or five inches from the surface, sowing begins. Early frosts in August are always to be feared, and it is found that by careful farming, whereby sowing is begun in time and completed as early as possible, some of this danger may be avoided; but, of course, in order to commence sowing whenever frost gives way, it is essential that ploughing be all overtaken in the "fall." Another advantage of "fall" ploughing is that the land retains its moisture better, and this is very important in dry districts. The land is disced and harrowed when the seed is sown, and then it is left till harvest, which generally begins about 20th August. Land is not ploughed so deeply or so well as old country farmers are accustomed to see it — generally about five inches deep and fourteen inches wide is the custom. The ploughs are double furrow ploughs and drawn by three or four and in some cases six horses, according to the kind of land. Ploughs, harrows, and all implements have a seat on them, harrows having frames, as it is found that more work is got done than if the men had to walk.

Harvesting is a busy time, and work is put through energetically, work being then carried on till dusk. The cutting is, of course, all done by binders, and these are generally from 7 to 8 feet in width and are drawn by four horses, so the acreage cut per day is considerable, since cutting is done "round and round," and a high stubble is left on the ground. Threshing is largely done in the field "off the stook," and the threshing mill owners have then a busy time fulfilling all their orders. Labor-saving machinery is at all times in evidence, but it is interesting to see how in the harvest time this has been successfully developed to great perfection. The threshing mill has a self-feeding web which does away with any person being needed to "feed in"—as it is called in Scotland—and revolving knives cut the binder twine. The expense of threshing varies considerably according to the district. Generally speaking the further west one goes the rate per bushel is higher, as wages generally are higher in the west, but in Manitoba the following rates may be taken as average:—(1) Where the mill-owner only provides the mill and its men and four pitchforks—that is, forkers—4 cents per bushel for wheat, but (2) where he provides all labour, including forkers in the field, teams and teamsters—the farmer only doing the driving of the wheat to the railway station or elevator—then the charge is 7 cents per bushel, and in the Northwest it is as high as 9 cents per bushel. The value of land in Manitoba varies, of course, very much, according to the kind of soil and the quality of house and buildings, but in good districts, where the land is good and near a railway, and



where there is a nice house and a good barn, the price is now about 35 to 50 dollars—£7 to £10—per acre. The size of farms varies considerably, and runs from a quarter section—160 acres—to two sections—1280 acres— or even more; but a large number are of 320 acres, which is half a section. The labour required to work a typical farm of this size is, in addition to the farmer himself, one yearly man, getting about 320 dollars per annum with board, and two extra men during harvest—six weeks—getting 2 dollars per day with board. Two teams of horses will be kept, generally four horses to a team. Broad roads are laid off round every section of land—640 acres, a square mile—and the general appearance of the country in these districts is that wheat growing is profitable and that money is being made.

Saskatchewan.—In this Province the system of farming may be described as similar to that already detailed in Manitoba.

Alberta—the Western Prairie Province.—Here “fall” or winter wheat is largely grown, and holdings may be said to be rather larger than in Manitoba. Expenses of cultivation are rather higher in this Province than in Manitoba, as wages generally are higher in the Northwest; and, as some work is in some cases done by hire, I append below the general cost of such :—

#### HIRING CHARGES.

	Per Acre.
Ploughing—breaking up prairie .....	\$3.00
Discing, four times .....	2.00
Harrowing and packing .....	.40
Seed—“fall” wheat—about 30 lbs.....	.60
Sowing .....	.50
Cutting .....	1.00
Binder twine .....	.50
Stooking .....	.60
Threshing .....	4.00

\$12.60

A typical farm in this Province extending to 640 acres—one section—requires of course to be fenced, and at the rate of 90 dollars per mile this will cost about 360 dollars. The railway rates are, of course, heavier for taking wheat from Alberta to Fort William than in the two before-mentioned Provinces—the distance being much greater—and Fort William is the centre to which wheat goes for shipment. This, of course, has to be taken into consideration by anyone investing in land and comparing the one Province against the others. In Alberta, good prairie land—lying within a few miles of a railway station—is now worth 12 to 14 dollars per acre, and large quantities are being bought by farmers and broken up at these prices.

## THE "HOMESTEAD."

One other matter is worthy of attention and that is the "Free grants of Government land." Free grants are given by the Government to small settlers coming in. Certain conditions are stipulated for, and these selections are being taken up in large numbers by men from all countries. The size of holding so given is a quarter section—160 acres—with the right to pre-empt another 160 acres at the price of three dollars per acre. The name given to the men taking up these free grants of land is "homesteaders," and the kinds of land and the conditions under which they live are worthy of some notice. Generally speaking the land given off in this way lies some considerable distance from the present railway tracks—25 or 30 miles is about the distance to be travelled before one of these selections—as a rule—can be obtained, as private individuals and others have bought up or obtained possession of land adjoining the railways, but while these selections may be some distance from railway communication at present, the probability is that with railways being extended most of those districts will be brought much nearer to good railway facilities. The land given over to the "homesteader" is generally of good quality, as the Government realise that to give these men land of inferior class is merely going to be worthless to them, and would spell disaster to their object, viz., encouragement of immigration and consequent development of the country.

As to the life which these men lead, some of our party—including myself—were deputed to drive into the prairie and camp out and see a district which is being settled in this way, and from what I saw I consider that these free grants of land undoubtedly enable many "small" men to get a start in a holding of their own, but the work required is such that only an active and energetic man should undertake it. The building of a small wooden house and stable—the latter perhaps of sods—has first to be done; a well to be dug and water found is an important matter; and then breaking up the prairie comes on. Before much wheat can be reaped and marketed two years will elapse, and, of course, during all that time the settler must have means to keep himself. Generally speaking, about 1,000 dollars, or £200, is about the sum that it would be prudent for a man to possess before he undertook this work, as failure to go on after having once started means abandoning everything and losing what has been expended. Of course some of the work can be done by hiring, and this would enable a man with little capital to do without buying a team of horses or cattle and requisite implements, and in winter he could look for other work, but to start the work the capital as above mentioned is practically necessary.

The Government gives assistance to settlers for boring

for water by sending their borers and merely charging cost and outlays, and as the supply of good water is so essential, and as failure to get it is sufficient to make a man throw up his "selection," this is a very important matter and one worthy of attention.

### FRUIT FARMING.

Though fruit is grown in most of the Provinces of the Dominion, yet I think it will be sufficient if I mention only those districts where fruit culture is the special and main branch of the industry, and in naming (1) the rich Annapolis Valley of Nova Scotia, (2) the fine fruit land in Southern Ontario near Niagara, and (3) the well known Okanagan Valley in British Columbia. I take in the principal fruit-producing districts of Canada, though of course such districts as the Kootenay Valley and the Thomson Valley are well worthy of attention had we more time at our disposal.

### RANCHING.

This branch of the industry is undoubtedly going back, as land is year by year being taken away out of the hand of the rancher and broken up for wheat, but large tracts of land will still remain and continue to be ranchers' country. Around Medicine Hat in Alberta we saw some cattle and horse-ranches. The severe winters are the danger. When driving over the prairie in ranching country the matter principally which surprised me was the extremely bare nature of the grass—no roughness of any sort, such a want of herbage of every kind. About forty acres for a bullock is spoken of, so you can imagine how much "meat" there was. In Australia I have seen grass country so different; both in New South Wales and in Central Queensland, where it is fairly hot, the natural grasses grow rougher and stronger.

### AGRICULTURAL COLLEGES.

No description of the agriculture of Canada would be complete which failed to mention the agricultural colleges and experimental farms which are scattered all over the Dominion. The prosperity of Canada is considered to depend on the prosperity of agriculture, and all classes of the community recognise this, and the Governments, both Dominion and Provincial, are providing in a splendid manner facilities for the farming community carrying on their business in the most effective and improved manner. It was our privilege to be shown over most of the colleges and farms.

### GENERAL CONCLUSIONS.

(1) In the mixed farming and dairying districts of Eastern Canada, including Quebec and Ontario, good opportunity exists, I think, for a farmer making a comfort-

able home and obtaining a fair return on his capital and for his labours. The comparatively small size of the holdings—about 100 acres—are suitable for the system of farming pursued, as dairying—which so largely holds sway in these Provinces—necessitates personal work and attention, and if holdings were much larger more hired labour would be required, and with dairying being an occupation which of all occupations requires so much personal work, the size of holding, though not enough to satisfy the ambition of a larger farmer, is suitable for conditions which exist.

(2) In the wheat lands of Western Canada large tracts of good land are available. Care, of course, will always have to be taken that good land is got, as some parts of the prairie is unsuitable, but it is in the wheat country that I consider the greatest development will take place. Money can be and is being made growing wheat, and a rise in the value of land in carefully selected districts appears probable. Whether these wheat lands of Western Canada are ever able to be—as they are by some expected to be—the “Granary of the Empire,” I do not say, but one thing seems certain that here it is, in Canada, that a great field exists for sound and profitable settlement, and a large and prosperous population will, I think, some day be producing large quantities of wheat for the western world.

(3) In the fruit districts already mentioned I think a good opening exists for a man with a little capital and with some horticultural knowledge or experience. In the Niagara district, as an example, vegetable and fruit culture could be profitably carried on about St. Catharines, etc. Some experience of business or an aptitude towards business methods would be useful to a man taking up this work.

(4) The free grants of land provide opportunity for settlers obtaining land cheaply, but the work to be done is arduous and should not be too lightly undertaken. £200 of capital is advisable to ensure against failure, and ample facilities, provided by Government, for obtaining a good supply of water would be advantageous, and success would—in many cases—be more assured.

(5) A good demand exists for agricultural labour at good wages, but during winter this is not always so, and this must always be a serious consideration—perhaps more than is at present credited. Women, as well as men, in some cases more than men, can find profitable occupation in the Dominion.

(6) The system of technical and scientific instruction which is so well organized and ably conducted in the Government Agricultural Colleges is a subject for special attention and admiration. In the Agricultural Colleges—both Dominion and Provincial—splendid work is being done, and, along with valuable experimental and research work, much useful and practical assistance is being rendered to

agriculture in every part of the Dominion. The prosperity of Canada is so much bound up with the prosperity of agriculture that the wisdom in carrying on this good work is very apparent.

(7) The general quality of stock seen was fairly good, and though in some districts some improvement might be made, yet on the whole stock seemed to be fairly good, and as to the general methods of land cultivation, though some matters seemed to be not quite up to standards as carried on in the intensely farmed districts of Scotland, yet on the whole, considering circumstances and the scarcity and dearness of labour, little criticism can be passed, I think, on Canadian methods.

### THE MOTHERLAND.

One word more on what was everywhere apparent, and that is the affection for and the loyalty to the Mother Country. The most patriotic Scotsman would find himself "at home" in Canada, and though it is separated from these shores by a long stretch of stormy sea, yet the people are so kindly to and appreciative of "old country" affairs that a Scotsman going there in quest of a new home would soon feel the wound, caused by quitting his native land, to become quickly healed, and, though in a new country, he would soon realise that it was, as it were, but another part of the old. The Canadian people are proud of Canada, and proud of that connection with that Empire, which, consisting not so much of colonies as of a great co-partnery of States, is united together under the British flag.

The lecturer was frequently applauded.

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(Editorial from the North British Agriculturist, of  
February 4, 1909.)

### "THE GRANARY OF THE EMPIRE."

At the meeting of the East Lothian Farmers' Club, on Friday, Mr. Harry Hope, Barneyhill, Dunbar, delivered a lecture on "Farming in Canada." The popularity of the lecturer, who is looked upon as a likely champion of the agricultural interests in the next Parliament, and his reputation as a clear-headed, far-seeing practical farmer of the best kind, fully accounted for the record meeting of the club which assembled to hear the lecture. Mr. Hope gave a very lucid account of Canada as he had seen it last summer when he was a member of the Commission to Canada. His account did "nothing extenuate nor aught set down in malice." He found that in Canada there was abundance of land for the landless, where men of grit and

ambition could by dint of hard work rapidly attain to a position of comfort as independent landowners. Men with capital could do well there, and even with very limited capital they could soon by hard work and frugal living as homesteaders become independent land owners. The East Lothian Farmers' Club heard the lecture, and having debated it, they came to the practically unanimous conclusion that there was very little inducement for them to go out to Canada. That conclusion was a perfectly right one! So long as anyone is thoroughly content as a farmer at home he has but little inducement to try his fortune in Canada or anywhere else. But it is not given to every one to be a prosperous farmer in "the Garden of Scotland"—as Sheriff Maconachie called East Lothian last week. This great Dominion has hundreds of millions of acres still under grass or "forest primeval," and the Canadian Government are very desirous of getting that great country settled as far as possible with true-bred Britons. The extensive settlement of the country has only been possible through extensive railway development, and the Canadian railway companies are building thousands of miles of railways every year with the view of opening up these lands and making traffic for themselves. It is the ambition of Canada to be "the granary of the world," and she is in a fair way to realise that ambition. Already Canada, though it has only a population of less than that of London, supplies quite three-fourths of all the cheese imported into this country, together with an enormous proportion of fruit and several millions of quarters of wheat per annum.

In the discussion of Mr. Hope's lecture on Friday, a good deal was said regarding the rigours of the hard cold winter. Canada has a glorious summer of heat and sunshine, but the greater part of the Dominion is admittedly a hard winter of five months' duration, when all work is practically at a standstill. But the cold there is a dry, bracing, and exhilarating cold, and is very different from the dismal winter fogs which chill one to the bone in this country. The cold of winter in Canada is thoroughly enjoyable, and if all farm work be stopped it gives the farmer plenty of time for curling, in which they are adepts, as so many East Lothian farmers found when they went through to meet the Canadian curlers at Glasgow, on Saturday, and got hopelessly beaten. Besides in Alberta at the base of "the Rockies"—which was formerly a great ranching Province, but is being rapidly transformed into an arable farming Province—the winter cannot be so very severe seeing that immense herds of cattle, sheep and horses live out in the open all the year round. Mr. Hope said that three years ago was a very disastrous winter there when 70 to 90 per cent. of the stocks died on the range. There must have been some mistake about this, however, for we find from the Provincial returns that there were 50,000 head of

cattle shipped out of Alberta in 1905, while there were 70,000 head shipped out of the same Province in 1906. In Canada large tracts of the land belong to the railway companies who get large grants of land in consideration of their outlay in building the railways. There is no question there of demurrage for railway waggons, as the railway companies do everything in their power to encourage settlers from whom the railways are to obtain their traffic. Some of these railway companies have shown an enormous amount of energy and enterprise in the development of the country. The Canadian Pacific Railway, which owns an immense tract of land in the Dominion, are carrying out a vast system of irrigation in the famous Bow River valley, and on the irrigated lands there, where the waters can at any time in the hot summer be turned on at will, there may be seen timothy meadows equal to any in the West of Scotland and crops of wheat and potatoes equal to any in East Lothian. These irrigable lands are sold at £5 per acre—or about one year's rental of the "red lands of Dunbar"—with an annual rental charge of 2s 2d per acre for the cost of maintaining and operating the canals. Something was said in the discussion about the unlikelihood of any one realising a fortune by growing 15 bushels of wheat per acre and getting only half a crown for it. But in the whole of the United States the average yield of wheat per acre is only 13 bushels, while in Russia it is only 11 bushels, and if it pays the Americans to grow 13 bushels and the Russians to grow 11 bushels, it will surely pay the Canadians to grow 20 bushels—that being about the average yield of the country—and get a dollar a bushel for it. Something was also said about the heartlessness of the Mortgage Companies in foreclosing the hapless mortgages. But it may well be asked whether instances are awaiting in this country—even in East Lothian—of creditors swooping down upon, and litigating over, the effects of a hapless bankrupt tenant? Altogether Canada is a great country which bids fair to realise her ambition to become "the granary of the Empire," but of course if any farmer is quite content with his lot at home he is just as well not to go to Canada.

# Agriculture in Canada.

By Professor R. B. Greig.

## THE MARITIME PROVINCES.

Ottawa, 22nd August, 1908.

Two and twenty Scotsmen are loose in Canada, with notebooks. They are the delegation of Scottish agriculturists, and they landed at Rimouski on 13th August, to begin their trip through Canada from ocean to ocean, and to report upon the country as they reported on Denmark in 1904, and Ireland in 1906. The North of Scotland is represented by Sir John R. G. Sinclair, of Wick; Mr. Ferguson, of Surradale; Mr. Forsyth, of Balintraid; Mr. Mackintosh, of Uig, factor of the Congested Districts Board; and the writer. The route is through every Province of the Dominion, and the first ten days have been spent in Prince Edward Island, Nova Scotia and New Brunswick.

The "Garden of the Gulf," as Prince Edward Island is called by its inhabitants, deserves the name. Such another sunny, sleepy, fertile land must be difficult to find in the northern hemisphere. Except for some marshes, and here and there a wood lot, there is scarcely an uncultivated acre in the island. Compared to Scotland with its 25 per cent. of plough land, Prince Edward Island, where 85 per cent. of the land is tilled, is truly a farming country. From the crest of one of its long undulations, the rich sandy loam, of the same colour and geological formation as that which reddens the streams round Penrith, stretches as far as one can see. Crops of potatoes, which, they tell us, will average six or seven tons per acre, alternate with Banner oats that would not disgrace lower Deeside, and big stacks of Timothy hay on the borders of the marshes, show what the alluvial mud can do. The farms are small, generally about a hundred acres, but the farmhouses are much larger than a hundred acres would carry in Scotland. Wooden, and grey and white, they show up everywhere against the dark spruces which invariably shelter them; a barn or two, an apple orchard, and some cows and pigs in the pasture give an impression of comfort and moderate prosperity.

And the islander ought to be prosperous. Potatoes bring £2 to £3 per ton. Hay is about the same price, and last season oats were selling up to £1 per quarter. All



this, with land far better than the average of Aberdcen-shire, seldom manured, and rent free, or rented at 12s. to 16s. per acre, should spell prosperity. But it is a sleepy Rip Van Winkle land, where motor cars are illegal conveyances, and where a living comes easily from a generous soil, out of which a Scotch farmer would raise twice the crop. As the train saunters down the shallow valleys, or climbs leisurely over the long undulations, every stage of the development of a forest country can be seen. A few acres of land recently cleared and burned is bearing a thin crop of clover in a forest of stumps, farther on a field of greater age shows only one or two of the most intractable rising above the oats, and lower in the valley is the oldest land, smooth and clear, and white with potato blossom, or green with swedes that promise 25 tons per acre.

As the cars, with a wholly fictitious appearance of hurry, rattle between banks of ferns and blueberries and young spruces, one might be somewhere between Banchory and Aboyne, but for the golden rod and crimson poke berries. The people are Scotch, too, or, as one of them said: "if they were not, they would say they were." But for Scotch there is nothing like Pictou County in Nova Scotia, where our Gaelic speaker is kept busy, and they say if you throw a club and hit a man he is either a Fraser or a Macdonald. Here we find a Scotsman retailing potatoes at £8 a ton, and selling his milk wholesale at 8d. a gallon. The local markets at the mines and steel works absorb all the local products, and if a farmer does not make money here, the fault must be all his own.

Between Westville and New Glasgow are miles of pits, with much of the smoke and grime we know at home; and we are truly in New Scotland. "This is the West Highland line," said one of the party as we climbed the hills to Truro, but apples never grow in Scotland as they grow in Nova Scotia. Sixty miles of apples we drove or motored through in the Annapolis Valley, and such apples! The orchards seem to be well managed; cover crops of clover or buckwheat are grown between the rows of trees and ploughed in, and farmyard manure and artificials are liberally used, as much as six and eight cwt. of the latter being applied in some places every year. An apple orchard of ten acres or so gives a living, and thirty or forty acres is a very valuable possession. The man who planted a few years ago is reaping his reward, and, judging by the handsome farmhouses and the white gowned women folk swinging in hammocks on the verandahs, the life is neither hard nor unlovely. The verandahs may give a wrong impression, however, for at this season the Annapolis Valley is beautiful enough to attract crowds of Yankee visitors as summer boarders. The telephone is a great institution here, and most of the farmers seem to be connected to the

town and to each other by wire, but certainly not because they would otherwise feel isolated, for a little farm well tilled is enough in this valley, which for many miles is just a long straggling village.

Above the orchards are the cow pastures, and nearer the skyline is the border of spruce and half-reclaimed land. The absence of sheep is remarkable, as the upland pastures are ideal grazing—dry, healthy, and abundantly watered. It appears that dogs and want of enterprise account for those sheepless braes. For every sheep in the country there are half a dozen dogs, ready and willing to increase their majority, and little or no legislation to discourage them. Steps are being taken, however, to fix the liability for sheep worrying on the owner of the dog, and to bring masterless curs to speedy decease. There is no doubt about the suitability of Nova Scotia and New Brunswick for sheep; but until the dogs are dealt with, nothing can be done. The country is waking, however, to the importance of sheep, and a flock of 4,000 is said to be grazing the uplands near Annapolis, while there is a project to stock 30,000 acres with sheep on the same side of the Province. When 50 per cent. of the dogs are dead, there is still the problem of winter keep in this snowy land, but with good grazing purchasable at 4s. to 40s. per acre, and with contiguous marshes that will grow two tons of hay without manure indefinitely, there seems to be money in sheep, especially on the grand scale.

The stock of the Maritime Provinces can scarcely be praised; here and there we find some good ones, as at the Truro Agricultural College, which is doing great work for the agricultural community, but generally the sheep and cattle are third rate, and the horses, though evidently grand roadsters, too light for our ideas of draught animals. Their toughness, however, is extraordinary. Two little horses, not heavy enough for a baker's van, will haul a couple of tons of coal uphill through four inches of dry sand. One expects them to lie down and die at the top, but they don't. There is a good market for heavy draught animals in the cities, but it will take some years to grade up the country mares to the required weight. The Truro Agricultural College is an interesting place only three or four years old. Short courses in grain and stock judging are very successful here, in spite of the fact that the farmers and farmers' sons who attend them are kept at work from 8.30 a.m. to 10 p.m. for a fortnight.

Principal Cumming, who is well known in Scotland, is very much alive to the educational needs of Nova Scotia, and is taking the tide of interest in nature study and school garden work at the flow, by providing classes for school teachers in summer. The college farm was bearing heavy crops as clean as a ribbon; the buildings are well

planned and finely kept. The live stock pavilion for stock judging and demonstrations is a covered circus with three or four stepped benches and a ring over 50 feet in diameter. It is connected with the live stock buildings, and, being lighted by electricity and roof and side windows, can be used by day or night. This must be a most valuable building in a country where stock are so far below the ideal in form and function, and when the fine specimens of dairy and other cattle belonging to the college are paraded in the ring, the Maritime farmer should be deeply impressed. There is a Holstein cow which, in 8½ months, has produced 1,270 gallons of milk, and another which yielded 1,000 gallons in less than 7 months, and we are told that the average cow of the country does not give much more than 300 gallons. What a field is here for the improver!

But the Maritime Provinces are one big field for the improver. One cannot help being struck by the possibilities that lie before a Scotch farmer's son with some capital and a college education. The pioneer has done his work, the forest is felled, the land subdued, the roads made (though very badly), and the schools and churches built, but the niceties of agriculture are not for the pioneer, and not often for his son. Perhaps their bodies are too big and their minds by contact with primeval rock and tree too simple for science. Anyway, they yearn for rougher fields, and go west to break in new lands. Here is the opportunity for the trained man, and what an opportunity! Cheap land, local markets that cannot be supplied, and, when they are filled, if ever, the shortest Atlantic passage to Great Britain at one's door!

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## II.

### QUEBEC AND ONTARIO.

Sudbury, 3rd September, 1908.

The most interesting characteristic of the Province of New Brunswick is the prevalence of game of all sorts, and especially of big game. One expects such an old Province to be agricultural, but it is, above all things, a timber and game country, where bears can be shot within a mile or two of quite large towns, and boys not out of their teens

have killed their moose on a holiday from school. The timber or lumber has spoiled the farming. When lumbering offers a speedier gain to capitalists and higher wages to labourers, farming must follow slowly, and still more slowly where land, though good enough, is not of the highest quality, and the springs are late. But the prices are as good as the heart of the farmer could desire, and if the crops are not equal to the prices, it is because the desire of the farmer is to the woods and not to the fields. Oats and potatoes are the chief crops, the latter partly for sale to the United States, and dairying is the stock industry. When a man can get 6d. to 8d.\* a gallon wholesale for milk at his door, without moving the cans a hundred yards to the roadside, there should be no lack of profit in dairying. The farmers in the New Brunswick valleys are undoubtedly "well fixed," as they would say, in spite of half-cultivated land and a plethora of weeds. We hear the usual statements, apparently well founded, that the scarcity of labour is the cause of the slovenly farming.

Here, again, is a land wasting for want of sheep, because every man must keep a useless dog. In some places "dog-proof" wire fences are erected five to six feet high, of innumerable wires crossed in a draught-board pattern, the squares becoming small rectangles near the ground. The expense of miles of such fencing merely to keep out mongrel curs is a reflection on the common sense of the New Brunswickers, and significant of the profit that must be obtainable from sheep.

It is the same in Quebec Province—dog versus sheep—and dog has it. In this Province we are in a land of "bristling" sunshine, and, consequently, of melons, citrons, cucumbers, squashes, and ten-foot maize; also a land of co-operative dairy factories, where the dairymen converts the botanical specimens (to call them grass would be too complimentary) of rocky hillsides into money by means of cows of strange colour and weird outlines, but, according to the authorities, of remarkable milking powers. They are an interesting breed called Canadian Jersey, an offshot of the cattle of Normandy and Brittany brought over by the first French settlers. We examined the milk returns of a number of herds, and found the average proportion of butter fat as high as 5 per cent. in the case of some individuals. As the milk is paid for on the basis of butter fat, and the tests are made at the factory, the figures are authentic. Some of the cattle are of good dairy shapes, and an association has done much to improve them, but the average cow is not a beauty, though the admirers of the breed say that for poor pasture and hard winter keep they are the best dairy cattle in America.

\*8d. per gallon is above the average.

Near Montreal are splendid plains of rich soil cultivated solely by French Canadians, the most conservative, the most interesting, and the worst farmers in Canada. They are soon to be shaken up, however! At St. Anne de Bellevue—the scene of the “Canadian Boat Song”—beside the Ottawa river, on a site of exceptional beauty, is an agricultural college, the like of which is not to be found in Great Britain, and possibly not in Europe. Built and endowed by Sir William Macdonald, of Montreal, it is the last expression of scientific knowledge in buildings and apparatus. Its objects are not merely to promote the agricultural and social efficiency of the Province of Quebec, but of all Canada, and, in time, it may draw its students from the Empire at large. It would require a dozen articles to do justice to this college; only the basal scheme can be stated here. The college is divided into three schools—a school for teachers, a school for agriculture, and a school for household science. A student is enrolled in that school in which the major portion of his work is taken, but much of the teaching and several of the buildings are common to all the schools. For example, in their first year, all students take the same classes in general science, nature study, etc. The men and women students occupy separate halls of residence, but work and play and dine together. The advantages of combining a trio of schools in one great college is obvious. The rural teachers learn everything from the standpoint of what is best for the farmhouse and the farm, while the students of household management are in daily contact with school and farm problems. The whole trend of the college worked out in every department and in every detail (even the buildings are placed to serve as guide posts to the central abstract idea—a most original conception) is to formulate an ideal of social welfare and agricultural efficiency which shall work like leaven in the minds of the students even in spite of themselves. The Macdonald College is only a year old, but that it has a great future is a safe prophecy.

The Canadians regard Ontario as the great agricultural Province of the Dominion, and at present they are right. So far, with few exceptions, we have found the farming in the valleys fertile—beautiful and well watered valleys as a rule, but still only valleys. In Ontario we come to one great stretch in which farm succeeds farm and orchard adjoins orchard from Lake Ontario to Lake Erie, and from Lake Erie to Lake Huron. And the farming is good, bad and indifferent, chiefly indifferent. In the mixed farming there is not much diversity—rotations are rather vague, but the cleaning crop is maize, which, made into silage, is the equivalent of our turnips and swedes. Oats and barley predominate over wheat, and clover and Timothy form the hay and pasture. Dairying is the stand-by, and the cheese

factory is the money-maker. Prosperity is evident everywhere, and the signs of the times are very different from those of fifteen years ago. We never became accustomed to the size and splendour of the farmhouse on a hundred acres, where fifteen or twenty cows produce the dividend. It is hinted sometimes that the farmer lives in the kitchen, and that the rest of the house is merely a display to impress the neighbours, but the money to build and maintain it must come from somewhere, and the farm is the only source. Weeds abound, and a clean farm is exceptional. The excuse is the usual one—scarcity of labour; but we find that where a farmer has erected a decent house for his farm servant and family, there is no difficulty in finding and keeping a man, especially if he is employed for the year.

Although there is much indifferent farming in Ontario, there is much that is praiseworthy, and the Guelph district would compare favourably with our best farms. Fine crops of maize and clover are common; indeed, we would be happy in Scotland to be sure of such good crops of the latter. Ingenious labour-saving machinery is much in use, especially for harvesting and haymaking, and the barns in which stock and crop are housed on different floors are often admirably arranged. Horse forks are universally used for filling the hay lofts, and a wagon-load of sheaves is housed in three lifts by means of slings and over-head gear. The manure from the byres is conveyed to the manure heap in an iron carrier suspended from a roof trolley which runs behind the cows throughout the whole length of the sheds, and terminates above the manure heap outside. A single pull of a trip-rope empties the entire load on the heap, and brings the carrier back into the barn. Where the cows stand in several parallel lines, the carrier joins or leaves the main line by overhead switches, on the same principle as railway switches. The food can be brought to the cows by another carrier on the same trolley line. Both hay forks and manure carriers are applicable to Aberdeenshire conditions, and would save much labour.

Ontario is more or less a made country, though it is not growing anything like its limit of farm products, and there is plenty of room for men with capital who may be dissatisfied with home conditions. Land is not cheap, however, there are whole tracts in the fruit areas which cannot be purchased for less than £200 per acre, while land known to be suitable for orchards, but unplanted, is held at £60 to £100 per acre. Ordinary farming land may be £16 to £20 per acre. Occupying ownership is the rule, and every farmer has the satisfaction of seeing his land increase in value with and without his labour. If we criticise the high rate of living of the Ontario farmer, his expensive house, and numerous luxuries, or what would

appear so to a north country Scot, we are answered by "Why should we save? His land is getting dearer, even without improvements; his children are sure of good openings; his own income is increasing year by year." It may be true, but I think a Buchan man would cut more thistles and less dash.

No one can study Ontario farming without learning how much the Ontario Agricultural College at Guelph has done for the Province. It is stated that the agricultural products of Ontario have doubled since the college was started, without any appreciable increase in the cultivated area. There is no doubt that the experiments and research carried out at Guelph have done great things for Canada. We find a farmer growing this or that variety of grain or roots, and explaining that he does so because the college has proved it to be the best, or keeping a milk record and selling his poor milkers because he learned to do so at the college. By means of the Experiments Association, engineered by the college, and including four thousand farmers in its membership, the best kinds of seed and the most useful methods have been demonstrated in almost every corner of the Province. It is a college which the Government of Ontario has every reason to be proud of.

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### III.

#### BRITISH COLUMBIA.

Red Deer, Alberta, 21st September, 1908.

As a matter of course, British Columbia is the Garden of Eden. From Prince Edward Island on the east to Vancouver Island on the west, each district, each valley, hill-side, or intolerable plain is the garden of Canada to its inhabitants, and the Garden of Eden to its real estate agents. British Columbia, however, has some foundation for reasonable pride. Some of its climates, for it has many, are nearly perfect — others would be but for mosquitos — and the various combinations of heat and moisture, with exceptionally rich soil, produce extraordinary results. The main line of the C.P.R. shows little of British Columbia, and that little stands chiefly on end under the names of the Rockies, Selkirks, and Coast Range Mountains; but half-concealed among the giants are innumerable valleys,

some heavily timbered, some more or less open, and all, in varying degree, capable of growing remarkable crops. If one travels to the Pacific by the Crow's Nest Pass, and returns by the Kicking Horse Canon on the main line, a fairly good idea is obtained of the southern part of the Province. The Crow's Nest Pass leads through the famous mining districts of Kootenay, and by a chain of lovely lakes to Revelstoke, but the mining which opened up the Kootenays is giving place to fruit-growing. The fruit possibilities were discovered by accident. Near the town of Nelson, on Kootenay Lake, an Aberdonian from Belhelvie, son of the Rev. Mr. Johnstone, who is living there now, bought a few acres of land, now locally and facetiously known as "Johnstone's Rock Pile." After buying the place, Mr. Johnstone discovered, concealed in the scrub which had overtopped them, a number of apple and other fruit trees, and, clearing away the bushes, found himself the owner of a considerable orchard in full bearing. This orchard was planted fifteen years ago by a French miner, who builded better than he knew, and, disappearing, left the fruit industry of Kootenay as his enduring memorial. That Frenchman's trees when we saw them were loaded to breaking with fruit; some were bolted together to prevent them splitting, and all were growing on a steep hillside, more rocks than soil.

If "Johnstone's Rock Pile" can grow such fruit, what will the good land do? became the local problem, and the solution is being attempted by hundreds of settlers from all points of the compass, who are buying land covered with scrub or timber for £20 an acre, content to clear it and wait five or six years for a return. The quality of the soil is not apparently of much importance; the climate is the great factor, and the growth which it produces is phenomenal. Apple trees make three or four feet of branch and stem in a year, clover grows three or four feet high, and can be cut three times, and some of us rode through Timothy which reached the horses' withers, though the seed had been merely scattered among the charred stumps of last year's clearing, and had never known plough or harrow. Truly, there is a great future before the beautiful valleys of the Kootenay. We saw it perhaps at its best, but its best is very good. Picture half a mile of undulating land strung along the base of a spruce-covered mountain and the edge of a narrow lake, imagine apple and peach orchards gapping the timber, and surrounding a pretty house, walk in fancy through a winding sun-spotted tunnel of foliage to the edge of the lake, where a motor launch and a canoe are moored, and you have a profit-making fruit ranch in full bearing, such a one as an incoming settler regards with hungry eyes, and sets himself to acquire by ten years labour and patience. The Kootenay valleys are fortunate in their rainfall, but even there irri-



gation will be necessary in a dry year, and as the heavy timber is cleared may become essential at all times.

The Okanagan Valley is quite a different "proposition," as they say here. It is familiar to north country men as the site of Lord Aberdeen's famous Coldstream Ranch, which has now been formed into a company, and is doing much pioneer work in irrigation and fruit growing. The southern end of the Okanagan is dry, dry as a bone, with an annual rainfall of about ten inches, but a climate for apples and peaches. When water is supplied, anything will grow. The older orchards on the Coldstream Ranch are in full bearing, and one year the apples realised £200 per acre. This, of course, is exceptional, and much less than half would be the average return, but the average crop is so large that £20 to £40 an acre for land "below the ditch," but entirely unimproved, is not a surprising purchase price. This valley is being settled very quickly. Some large corporations have bought thousands of acres in the rough, irrigated them, and sold them in small lots of ten acres and upwards. This is the policy of the Coldstream Company, which also undertakes the management of new orchards for owners until the trees are bearing, and appears generally to carry out its scheme to the advantage of both seller and company. Those fine fruit valleys provide excellent openings for men with capital, but only for such. No man need go into one of them with less than a minimum of £200, and even then he will have very hard times for some years. The labour on the land is chiefly supplied by Indians, Chinamen, and, latterly, by Hindoos, and, except as a foreman or manager, the white man would be rather out of place among them. There are other valleys to which the Oriental has not yet penetrated in which the white man will do well as a labourer on the land, but, on the whole, he had better come in as a landowner and employer when he has saved money elsewhere.

For the production of agricultural crops, the delta of the Fraser River puts every other region of Canada in the shade. This deep alluvial land is near enough to Vancouver and New Westminster to supply those cities with hay, oats and garden stuff, and the men who took up land on Lulu Island, where the Fraser joins the sea, are now wealthy, though their holdings may not be more than 150 acres in extent. We hear of crops of 7 tons of hay, and oats of over 100 bushels per acre. We hear many things in this country, so we ask for the price of land and the rents. The rents of the delta are the proof of its productivity: £4 to £6 per acre are paid for the right of cropping, and the leases seem to be five years as a rule. The Chinaman is frequently the tenant, and is charged a higher rent because he takes potatoes year after year, and is sometimes indifferent to manuring. He is, however, a

most ingenious cultivator, and when early potatoes are wanted he will have half a dozen of his compatriots on the potato drills feeling at the base of each stem for the largest tubers, which will be removed with as little disturbance as possible. At the end of the day there will be a ton or two of saleable potatoes. The programme is repeated next week, and so on through the season of early potatoes till the expiring stem is left with only one or two on which to expend its last energies.

Soil of such productive power is not cheap, and some recent sales of land in full cultivation, with house and barns, have been at the rate of £100 to £150 per acre. For land which is not suitable for fruit, these are very high prices. Most districts have their drawbacks, however, and one of the disadvantages of life on Lulu Island is the absence of good drinking water. One of the farmers who drives his milk to the mainland informed us that he brought back drinking water in the milk cans.

The prosperity of the British Columbian farmer who can grow his crops near a town may seem exceptional and his profits excessive, judged by old country standards, but it must be admitted that they are fully deserved. Only a man of unusual courage and self-confidence, with great faith in the future of the Province, can set himself to cut out a farm from west coast timber land. To us it appears an almost impossible task, and folly to attempt it, but it has been done, and hundreds, possibly thousands, are at this moment at grips with the forest. No man can hope to clear heavy timber land at less than £40 an acre where the timber, as is generally the case, cannot be marketed, and even the Canadian Pacific Railway Company, which is clearing the land with most ingenious tackle and engines of fifty horse-power, cannot do it for less than £25 to £30 per acre. The unavoidable waste of wood is distressing to witness. In one small clearing the pile of logs and stumps ready to be burned was over ninety feet high, and would take over a week to burn out, and yet not more than three or four acres were bared, and they had been through a forest fire. No words can describe the luxuriance of growth of land which has never been touched by fire. The soil is under six or eight feet of fallen and moss-covered logs, leaves, and brushwood, and through the debris cedars and redwoods rise, straight as a lighthouse, and almost as thick, until they spread into branch and leaf eighty to a hundred feet above. Small wonder that the remains of such giants when warmed by the sun and stirred with the plough should produce such mighty crops of grain and hay.

Vancouver Island is a dryer climate than the coast of the mainland, and so fruit is the staple crop; and, according to all accounts, very profitable. Here the timber is not so heavy, and clearing is easier. Here and there the land is

almost open, and near Victoria much of it was settled forty or fifty years ago by miners who make a competence by washing gold in the Fraser River.

The two railway lines which pierce the northern parts of British Columbia will open up large areas for settlement, and the land and climate are said to be excellent. The winter is slightly longer, but not cold, as cold is understood in Manitoba, and the ordinary farm crops will grow to perfection. But British Columbia land is for the capitalist, not for the poor white, who must compete as a labourer with the Chinese, Japanese, and natives of British India. Chinese immigration is discouraged by a head tax of £100, which is paid in part by the house-owner of Vancouver or other town. Formerly the Chinese cook got £4 to £5 a month; now he demands and receives £7 to £8, which enables him to repay the friend or money-lender who furnished the £100 for his entrance. Thus we rob Peter and pay Paul. The Chinese are popular in the west. They are model house servants, clean to a marvel, trustworthy, and kind to children, and they have no political ambition. The Japanese, on the other hand, while more capable and clever, are less to be relied on, and alarm the Canadians by taking an interest in the management of the country, and trying to get rich on their own account. Such is the story to the casual tourist. The poor Hindoo looks very much out of place. His cleanliness is not above suspicion, so he is ruled out as a cook or housemaid, his caste prevents him eating with the other men in a lumber camp or farm cabin, and his food seems to inspire him to a melancholy saunter, which does not suit the hustling employer.

British Columbia is a great country, magnificent in scenery, glorious in climate, certain of a wonderful future, but with a vague uneasiness in the air. When the noiseless Chinaman serves the soup, or the inscrutable Jap steps back to look up at the passing train, cool, self-poised, efficient, foreign, one thinks of time, treaties, and Eastern politics instead of fruit and the last exaggeration of the real estate agent.

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## THE GREAT WHEAT BELT.

Carlyle, Saskatchewan, 29th September, 1908.

The great wheat belt of Canada has been so often described by lecture and lantern slide that it is difficult to

imagine anyone in the old country who has not heard of its extent and resources. But to one who knew the country fourteen years ago, its development in the interval is of intense interest, and the inevitable comparisons are perhaps not without value as an indication of the progress made in the time. The most obvious difference at once apparent to the returned traveller is the increased size of the cities and towns. Winnipeg, which was a small town by our standards, is a well-built city about half the size of Aberdeen, and Brandon and Regina, which were mere villages, can truthfully call themselves towns. All over the Northwest is the same evidence of expansion. A station at which was a general store, a blacksmith's forge, and a railway siding, has now half a dozen elevators, a street of shops, and a number of handsome private houses surrounded by trees, where all was open prairie a few years ago. Winnipeg, which then stood in the midst of a houseless, treeless savannah, is now surrounded by farms growing great crops of wheat. Apart from the Winnipeg district, there is not much evidence of increased cultivation along the main line of railway to the west. The immigration has been chiefly north and west, to what are supposed to be better lands. There is no doubt, however, of the prosperity that has reached the farmers on the main line. Small shanties and dugouts have given place to large barns and fine houses, and the crops, this year at all events, are as good as ever. Implements of new type have evolved in the last ten years. Breaking up prairie with a ten-furrow steam plough was then unheard of, disc ploughs were unknown, and straw blowers and automatic feeders on threshing mills were scarcely ever seen.

The greatest changes, however, have taken place in the methods of cultivation. In Aberdeenshire, where farming practice has become almost rigid in method, it puts a heavy strain on the imagination to assume that in ten years oats, turnips and barley may be grown not only by implements of entirely different character but by methods never heard of before, and yet ten or twelve years have been sufficient to bring about such changes in the Northwest. The rush to get stubble ploughed before frost began in the fall, and the subsequent rush of spring ploughing to get oats in before it was too late, appear to be confusion of the past. Now it has been demonstrated that in some areas the best rotation is a three-year one of two grain crops and a bare fallow. During the three years, the land is ploughed once only (imagine a Buchan farm requiring only one ploughing in three years!), when it is summer fallowed; the following year wheat is sown, and the year after, instead of stubble ploughing and then sowing, the stubble is burned off in the spring and the seed sown on the burned surface without any previous cultivation or after one turn of the disc harrows. It has been found that this method conserves

the moisture most effectively, and wheat farming in the Northwest is very much a question of how to get a maximum crop on a minimum rainfall.

Thus, at Indian Head, it has been shown on the Experiment Station that oats after wheat are 30 or 40 bushels per acre, and on the same land in the same year, but after summer fallow, they yield up to 100 bushels per acre, while wheat after a grain crop yields 12 to 15 bushels, and, after fallow 25 to 35. Twenty years ago Indian Head was considered a poor place for wheat growing, but the Experiment Station showed the way, and now Indian Head is the largest initial wheat shipping station in Canada, and its farmers drive about in motor cars (very recklessly), and cherish the idea that on the three-course shift they can grow wheat for ever on their fat, black farms. Well done, the Experiment Station!

In Southern Alberta the "dry farming" system is even more fully developed than in Southern Saskatchewan. In the former district, there is no hope of a crop unless every shower of rain which falls on the summer fallow is at once conserved by harrowing or other surface cultivation. To grow wheat successfully south of Lethbridge or Macleod without irrigation requires constant attention and high intelligence on the farmer's part, if the wheat seed is to be sown in August with any prospect of a crop. The reward is great, however, for the autumn-sown wheat yields much more than the spring-sown if all the summer rains have been properly stored in the soil. Wherever wheat grows moderately well and escapes frost, wheat is still the king. Everyone talks, thinks and dreams wheat. It is the "finest" wheat soil in the world, it is the "finest" quality of wheat in the world, and we can grow this "finest wheat" on this "finest" soil for ever and ever. Such is the week-day creed of not a few. They tell of a settler from a poor district in a bad year who consulted a doctor because he was suffering from boils. The doctor told him he was living too high, and must reduce his diet. "But," said the settler, "I come from ———, and I have had nothing to eat for weeks but boiled wheat." "Eat bran," said the doctor. We quote this to demonstrate the quality of Canadian wheat. One cannot help admiring the pride of local patriotism of the Nor'-Wester. He will tell you that his district is the very garden of Canada, and you look round upon a desolation of wheat stubble and frame houses and wonder if he is serious. And he is—but sometimes he has land to sell.

West of Moose Jaw enormous areas are still unsettled, and here the rancher pursues his waning industry. Irrigation and experts in "dry farming" are pushing him out, all the more easily because he has been discouraged by the awful winter of 1905-6, when his losses were very heavy. We hear dreadful tales of the cattle mortality in that wild

winter, and bones and skeletons beside the line confirm them.

The central and northern parts of Alberta and Saskatchewan, which were considered out of the running some years ago, are now completely settled in the vicinity of the railroads; that is to say, settled by "homesteaders" who have taken up 160 acres of wild land at the cost of a fee of £2 and certain conditions of cultivation and residence for three years. Or, as the Canadian puts it, the Government bets you 160 acres of land against 10 dollars that you won't stay on the land for three years. Large areas on the verge of the railway, origin ally belonging to the Government or railway company, are held by speculators for a rise in price. The rise occurs almost entirely owing to the exertions and improvements of the "homesteaders," who are really making the country for the benefit of the speculators. When the "homesteaders" ar bona-fide farmers have made roads, erected schools, provided churches, and created a village, the speculator obtains one hundred or more per cent. of purely unearned increment. Because of the way in which townships are surveyed, homestead sections alternating with railway sections, it is impossible to avoid this handicap upon the settler except by increased taxation and unproductive land.

In spite of the exceptional immigration of the last few years, much land is still open for settlement at some distance from the railways. In the Province of Alberta alone less than 10 per cent. of the land is under cultivation, and for mixed farming and dairying Alberta is a splendid country. Much of the country is covered with poplar and willow scrub, which provides shelter and firewood, and is easily cleared. The soil is generally a good black loam, capable of producing great crops of winter wheat, oats, and Timothy hay. Crops of 80 to 100 bushels per acre are comparatively common, and, unlike the oats of eastern Canada, those Alberton oats weigh 38 to 42 lbs. per bushel. All stock do well; even the delicate Jersey cow thrives and makes a profit. Spring wheat is apt to be frosted, and this, with the great distance from market, which reduces the price of wheat several cents below the Manitoba price, and adds several cents to the freight of necessaries brought from the east, is one of the drawbacks of the country. Farmers are doing well, however, especially those who produce beef and milk as well as grain, towns and villages are growing, rail-ways are being pushed farther into the wilderness, and, on the whole, the majority of the inhabitants are prospering—with a struggle.

Owing to the lesser elevation of the land, the great Peace River valley, hundreds of miles north of Edmonton, is capable of producing wheat, and wheat in small patches has been grown there for many years, and ground in the

mills of the Hudson Bay Company, but the land south of Edmonton still open for settlement is so great that the Peace River valley is not likely to be disturbed for some years. It is difficult to realise the extent of the "farther north." By stage, scow, and steamer, one can proceed two thousand miles beyond the railway and into the Arctic circle. The most northerly steamer makes one trip per year, and an Aberdonian who is one of her officials tried to sell us a ticket for the Arctic Ocean. We did not buy. year, and an Aberdonian who is one of her officials tried ally successful, or the failures keep in the back ground. We have met or heard of five or six students of the North of Scotland Agricultural College. Only one of these is farming; the others include a law student, bank clerk, and hotel clerk.

Concerning the prospects for Scotsmen in the North-West, it may be stated generally that they are good. We have been told it is the best possible country for a man with or without capital. That may be so, but it is certainly a much better country for the man with capital than for the man without it. The Minister of Agriculture for Alberta says that a man who wishes to make a start should have not less than £200 of capital. Even he will have a hard struggle for some years. Many have started with much less, and there is plenty of room for men of grit and determination who can do that; but the fact remains that a man who starts on credit, or very little more, has a long, hard row to hoe. It should never be forgotten that the most expensive start is to accept the Government offer and take up 160 acres of wild land. For some there may be no alternative, but a farm with some buildings and a proportion of ploughed land can be rented almost anywhere on the share system, and will bring a man more quickly to his goal than the heartbreaking struggle with wild land which the native Canadian is far better fitted to engage in. For those with £2,000 or £3,000 of capital, Canada anywhere is full of opportunities in farming. In the North-West, farming on a great scale can be carried on with such a start, and there are many American farmers from the northern States who are making a great success of large farming, both in the grain and mixed farming districts.

The personal equation is of greater importance than the soil or district. The right kind of men will succeed anywhere. A Scotsman whose forefathers brought Aberdeen and Kincardine out of rock and heather has nothing to fear in Canada.

Harvesting Wheat, Killarney, Manitoba.





## CANADIAN GOVERNMENT AGENTS.

Intending emigrants would do well, before deciding upon the particular locality to which to go, to consult one of the Canadian Government Agents in the United Kingdom who will without charge, gladly give, either personally or by letter, full and reliable details regarding any point, upon which the intending emigrant desires information. Other pamphlets dealing with the report on Canada of the Scottish Agricultural Commission, may be secured by applying to any of the agents mentioned underneath.

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The following is a list of the Canadian Government Agents in the United Kingdom:—

### England—

Mr. J. Obed Smith, Assistant Superintendent of Emigration, 11-12 Charing Cross, London, S. W.

Mr. A. F. Jury, Old Castle Bldgs., Preeson's Row, Liverpool.

Mr. G. H. Mitchell, 129 Corporation Street, Birmingham.

Mr. H. M. Murray, 81 Queen Street, Exeter.

Mr. L. Burnett, 16 Parliament Street, York.

### Scotland—

Mr. Malcolm McIntyre, 35-37 St. Enoch Square, Glasgow.

Mr. John McLennan, 26 Guild Street, Aberdeen.

### Ireland—

Mr. John Webster, 17-19 Victoria Street, Belfast.

Mr. Edward O'Kelly, 41 Dawson Street, Dublin.

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## IMPORTANT.

Farmers, Farm Labourers, and Female Domestic Servants are the only people whom the Canadian Immigration Department advises to go to Canada.

All others should get definite assurance of employment in Canada before leaving home, and have money enough to support them for a time in case of disappointment.

